

EXHIBIT G

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. 82-140

NPDES NO. CA 0078336

WASTE DISCHARGE REQUIREMENTS
FOR
ELF AQUITAINE OIL AND GAS, INC.
POSO CREEK OIL FIELD
KERN COUNTY

The California Regional Water Quality Control Board, Central Valley Region (hereafter Board), finds that:

1. Elf Aquitaine Oil and Gas, Inc. (hereafter Discharger), has assumed ownership of certain oil field production wastewater discharge facilities in Poso Creek oil field which were previously owned by Rainbow Oil Company.
2. The discharge is presently governed by Waste Discharge Requirements, Order No. 79-10 (NPDES Permit No. CA 0078336) adopted 26 January 1979.
3. All wastewater and oil produced on the lease is piped to a steel holding tank for preliminary separation. Wastewater from the tanks, an average .5 mgd (21.8 l/sec), is discharged to a series of unlined holding ponds for further separation prior to treatment in a nitrogen gas flotation cell. An average .15 mgd (6.6 l/sec) of treated wastewater is produced into steam and used for enhanced recovery purposes.
4. All wastewater not reused for enhanced recovery purposes, an average .35 mgd (15.3 l/sec) is discharged to an unnamed tributary of Poso Creek, a water of the United States, at a point in the SW $\frac{1}{4}$ of Section 11, T27S, R27E, MDB&M. In the event of a steam generator shutdown, all wastewater would need to be discharged.
5. The Board adopted a Water Quality Control Plan for the Tulare Lake Basin on 25 July 1975. This Plan contains a policy on oil field wastewater disposal in the Poso Creek drainage area with salinity limits for the disposal of petroleum production wastewater. These limits are:

<u>Characteristic</u>	<u>Unit</u>	<u>Maximum Concentration</u>
Specific Electrical Conductance	umhos/cm @25°C	1000
Chlorides	mg/l	200
Boron	mg/l	1.0

WASTE DISCHARGE REQUIREMENTS
ELF AQUITAINE OIL AND GAS, INC.
POSO CREEK OIL FIELD
KERN COUNTY

-2-

6. Analyses of wastewater from the Discharger's operation show the following:

<u>Characteristic</u>	<u>Unit</u>	<u>Concentration Range</u>
Specific Electrical Conductance	umhos/cm @25°C	315 - 685
Chlorides	mg/l	37 - 132
Boron	mg/l	0.1 - 0.8

7. Beneficial uses of Poso Creek are agricultural supply; recreation; esthetic enjoyment; ground water recharge; and preservation and enhancement of fish, wildlife and other aquatic resources.
8. Beneficial uses of the ground water are municipal, industrial, and agricultural supply.
9. Effluent limitation, and toxic and pretreatment effluent standards established pursuant to Sections 301, 302, 304, and 307 of the Federal Water Pollution Control Act and amendments thereto are applicable to the discharge.
10. The action to adopt an NPDES Permit is exempt from the provisions of the California Environmental Quality Act (Public Resources Code Section 21000, et seq.), in accordance with Section 13389 of the California Water Code.
11. The Board has notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.
12. The Board, in a public hearing, heard and considered all comments pertaining to the discharge.
13. This order shall serve as a National Pollutant Discharge Elimination System permit pursuant to Section 402 of the Federal Water Pollution Control Act, or amendments thereto, and shall take effect ten days from date of hearing, provided EPA has no objections.

IT IS HEREBY ORDERED, that Elf Aquitaine Oil and Gas, Inc., in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder and the provisions of the Federal Water Pollution Control Act and regulations and guidelines adopted thereunder, shall comply with the following:

WASTE DISCHARGE REQUIREMENTS
 ELF AQUITAINE OIL AND GAS, INC.
 POSO CREEK OIL FIELD
 KERN COUNTY

-3-

A. Prohibitions:

1. By-pass or overflow of untreated or partially treated wastes is prohibited.
2. The discharge of wastewater in excess of the below limits to unlined storage facilities is prohibited:

Specific Electrical Conductance @25°C	1000 umhos/cm
Chlorides	200 mg/l
Boron	1.0 mg/l

B. Effluent Limitations:

1. The discharge of an effluent in excess of the following limits is prohibited:

<u>Constituents</u>	<u>Unit</u>	<u>30-day Average</u>	<u>Daily Maximum</u>
Specific Electrical Conductance	umhos/cm @25°C	--	1000
Chlorides	mg/l	--	200
	kg/d	--	303
Boron	mg/l	--	1.0
	kg/d	--	1.5
Oil and Grease	mg/l	35	45
	kg/d	39.7	51.2

2. The 30-day mean daily flow shall not exceed .35 mgd (15.3 l/sec).
3. The maximum daily discharge shall not exceed .5 mgd (21.8 l/sec).
4. Any discharges to sumps which are not adequately screened to protect wildlife shall not cause floating oil, grease, scum or foam in any sump.

C. Receiving Water Limitations:

1. The discharge shall not cause visible oil, grease, scum or foam, floating or suspended material in the receiving waters or watercourses.

WASTE DISCHARGE REQUIREMENTS
ELF AQUITAINE OIL AND GAS, INC.
POSO CREEK OIL FIELD
KERN COUNTY

-4-

2. The discharge shall not cause concentrations of any materials in the receiving waters which are deleterious to human, animal, aquatic, or plant life.
3. The discharge shall not cause esthetically undesirable discoloration of the receiving waters.
4. The discharge shall not cause fungus, slimes, or other objectionable growths in the receiving waters.
5. The discharge shall not cause bottom deposits in the receiving waters.
6. The discharge shall not cause concentrations of any materials in the receiving waters which are deleterious to human, plant and animal, or aquatic life.
7. The discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Board or the State Water Resources Control Board as required by the Federal Water Pollution Control Act and regulations adopted thereunder. If more stringent applicable water quality standards are approved pursuant to Section 303 of the Federal Water Pollution Control Act, or amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.
8. This permit shall be modified, or alternatively, revoked and reissued, to comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a)(2) of the Clean Water Act, if the effluent standard or limitations so issued or approved:
 - (a) Contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
 - (b) Controls any pollutant not limited in the permit.

The permit as modified or reissued under this paragraph shall also contain any other requirements of the Act when applicable.

D. Provisions:


1. Neither the discharge nor its treatment shall create a nuisance or pollution as defined in Section 13050 of the California Water Code.
2. The requirements prescribed by this Order supersede the requirements prescribed by Order No. 79-10, adopted by the Board on 26 January 1979, which is hereby rescinded.

WASTE DISCHARGE REQUIREMENTS
ELF AQUITAINE OIL AND GAS, INC.
POSO CREEK OIL FIELD
KERN COUNTY

-5-

3. The Discharger shall comply with the attached "Standard Provisions and Reporting Requirements", dated 1 January 1982, which are a part of this Order.
4. The Discharger shall comply with the attached Monitoring and Reporting Program No. 82-140 as ordered by the Executive Officer.
5. This Order expires five years from the effective date and the Discharger must file a Report of Waste Discharge in accordance with Title 12, California Administrative Code, not later than 180 days in advance of such date as application for issuance of new waste discharge requirements.
6. In the event of any change in control or ownership of land or waste discharge facilities presently owned or controlled by the Discharger, the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be forwarded to this office.

I, WILLIAM H. CROOKS, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on 10 December 1982.



WILLIAM H. CROOKS, Executive Officer

CSS:iay

08/20/82

INFORMATION SHEET

POSO CREEK OIL FIELD KERN COUNTY

Poso Creek Oil Field is on the east side of San Joaquin Valley about seven miles northwest of Bakersfield in Kern County. It encompasses an area of about 46 square miles in Townships 27 and 28 South, Range 27E, Mount Diablo Base and Meridian. The topography consists of highly eroded foothills of the Sierra Nevada. The climate is dry with hot summers and mild winters. Average annual rainfall is six inches. The geologic structure is a southwesterly dipping anticline consisting of sedimentary formations ranging from Recent Alluvium to Eocene Famosa Sands. Within disposal areas, permeable surface materials range from Recent alluvium to Kern River Formation.

Information regarding the occurrence and movement of ground water in the field is limited. The Kern River Formation is the principle water bearing unit. Ground water in this formation is believed to be largely unconfined, but areas exist where partial and/or local confinement occurs. Ground water movement is toward the west.

Local ground water is classified as sodium bicarbonate with electrical conductivities ranging from 200 to 700 umhos/cm. It is of suitable quality for domestic and agricultural use.

Production wastewater in the field is disposed of by percolation from unlined ponds, discharge to Poso and Little Creeks or associated drainages, and deep well injection. Electrical conductivities of wastewater vary between 750 and 2700 umhos/cm. Approximately 46.8 million barrels of wastewater were produced in 1980.

Poso and Little Creeks are the only significant surface water features within the field. During periods when there is no natural runoff, the creeks carry only wastewater from Kern Front, Poso Creek, Mount Poso and Round Mountain Oil Fields.

To protect water quality in the Poso Creek region the Board on 23 November 1970 adopted the "Interim Water Quality Control Policy for Ground and Surface Waters in the Poso Creek Subarea". The policy imposed the following limitations to all wastewaters discharged to Poso Creek or its tributaries and to facilities which do not preclude percolation to the usable ground or surface waters:

<u>Characteristics</u>	<u>Units</u>	<u>Maximum Concentration</u>
Specific Electrical Conductance	umhos/cm @25°C	1000
Chloride	mg/l	200
Boron	mg/l	1.0

These waste discharge requirements were formulated to reflect this policy.

The majority of wastewater discharged to unlined sumps and surface water drainages meet the above limitations. That which does not needs to be evaporated in unlined ponds, injected into formations of equal or poorer quality, or hauled to appropriate disposal sites.

Wastewater disposed of by surface spreading, by discharge into surface drainage, or in unlined sumps upon the surface of alluvial soils or the Kern River formation will infiltrate, move through the underlying sediments, and ultimately reach the ground water. It will then probably move west or southwest toward San Joaquin Valley.

These waste discharge requirements were formulated to protect ground water quality and to reflect policies in the Basin Plan that set forth salinity limits for wastewater disposed in unlined sumps.

The proposed Order addresses an existing operation and is therefore exempt from an environmental review in accordance with California Environmental Quality Act regulations. A notice of exemption will be filed with the Secretary of Resources following Board action on the matter.

CSS:dg
5/28/82

INFORMATION SHEET

Elf Aquitaine Oil and Gas, Inc.
Poso Creek Oil Field
Kern County

Elf Aquitaine, previously Rainbow Oil Company, operates an oil production facility in Poso Creek oil field. Poso Creek oil field is on the east side of the San Joaquin Valley about seven miles northwest of Bakersfield in Kern County. It encompasses an area of about 46 square miles in T27 and 28S, R27E, MDB&M. The topography consists of highly eroded foothills in the Sierra Nevada. The climate is dry with hot summers and mild winters. Average annual rainfall is six inches. The geologic structure is a southwesterly dipping homocline consisting of sedimentary formations ranging from Recent Alluvium to Eocene Famoso Sands. Within disposal areas, permeable surface materials range from Recent Alluvium to the Kern River Formation.

Information regarding the occurrence and movement of ground water in the field is limited. The Kern River Formation is the principle water bearing unit. Ground water in this formation is believed to be largely unconfined, but areas exist where partial and/or local confinement occurs. Ground water movement is toward the west.

Local ground water is classified as sodium bicarbonate with electrical conductivities ranging from 200 to 700 umhos/cm. It is of suitable quality for domestic and agricultural use.

Production wastewater in the field is disposed of by percolation from unlined sumps, discharge to Poso and Little Creeks or associated drainages, and deep well injection. Electrical conductivities of wastewater vary between 750 and 2700 umhos/cm. Approximately 46.8 million barrels (2.0 billion gallons) of wastewater were produced in 1980.

Poso and Little Creeks are the only significant surface water features within the field. During periods when there is no natural runoff, the creeks carry only wastewater from Kern Front, Poso Creek, Mount Poso and Round Mountain oil fields.

To protect water quality in the Poso Creek region, the Board on 23 November 1979 adopted the "Interim Water Quality Control Policy for Ground and Surface Waters in the Poso Creek Subarea". The policy imposed the following limitations to all wastewaters discharged to Poso Creek or its tributaries and to facilities which do not preclude percolation to the useable ground or surface waters:

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INFORMATION SHEET - CONTINUED

ELF AQUITAINE OIL AND GAS, INC.
POSO CREEK OIL FIELD
KERN COUNTY

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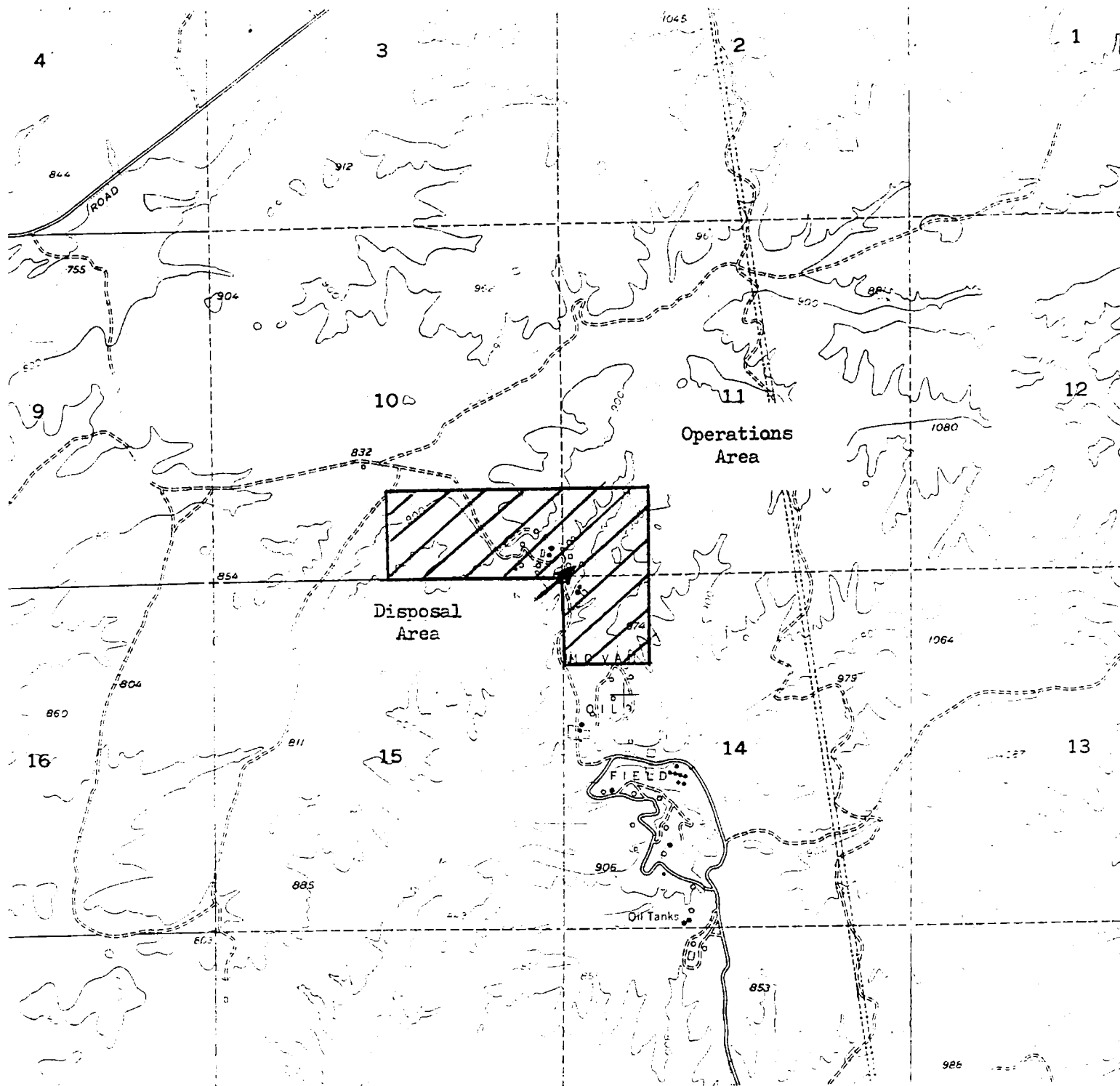
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These waste discharge requirements were formulated to protect ground water quality and to reflect policies in the Basin Plan that set forth salinity limits for wastewater disposed in unlined sumps.

The proposed Order addresses an existing operation and is therefore exempt from an environmental review in accordance with California Environmental Quality Act regulations. A notice of exemption will be filed with the Secretary of Resources following Board action on the matter.

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09/17/82



ELF AQUITAINE OIL AND GAS, INC.

Poso Creek Oil Field
 Section 11, T27S, R27E, MDB&M
 North of Oildale 7½ USGS Quad
 Kern County

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. 82-140

NPDES NO. CA 0078336

FOR
ELF AQUITAINE OIL AND GAS, INC.
POSO CREEK OIL FIELD
KERN COUNTY

EFFLUENT MONITORING

A sampling station shall be established for each sump and shall be located where representative samples of the petroleum wastewater can be obtained. The following shall constitute the effluent monitoring program:

<u>Constituents</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Minimum Frequency of Analysis</u>
Total Flow	mgd	Estimate	Quarterly
Specific Electrical Conductance	umhos/cm @25°C	Grab	Quarterly
Boron	mg/l	Grab	Quarterly
Chlorides	mg/l	Grab	Quarterly
Oil and Grease	mg/l	Grab	Quarterly

If the discharge is intermittent rather than continuous, then on the first day of each such intermittent discharge, the Discharger shall monitor and record data for all of the parameters in the effluent monitoring schedule, after which the frequencies of the analysis listed in the schedule shall apply for the duration of each such intermittent discharge. In no event shall the Discharger be required to monitor and record data more often than twice the frequencies listed in the schedule.

The Discharger shall implement the above monitoring program by 1 January 1983. Monitoring reports shall be submitted to the Board for each calendar quarter by the 15th day of the month following the end of the quarter, commencing 15 April 1983.

Ordered by


WILLIAM H. CROOKS, Executive Officer

10 December 1982

(Date)

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08/20/82